From:	HOPE Bruce
To:	Eric Blischke/R10/USEPA/US@EPA; Earl.Hayter@usace.army.mil; Ben Cope/R10/USEPA/US@EPA; CClaytor@parametrix.com
Cc:	Chip Humphrey/R10/USEPA/US@EPA; Kristine Koch/R10/USEPA/US@EPA
Subject:	RE: Portland Harbor Fate and Transport Model
Date:	09/17/2009 07:43 PM

I think it still comes down to what the model is for - management "what if" exercises (which was the original intent) or full blown predictions of sediment concentrations thru space & time. This is a question that never seems to get an answer. Until you have that answer, I don't think you can select a model or even know if you need one.

-----Original Message-----
From: Blischke.Eric@epamail.epa.gov [mailto:Blischke.Eric@epamail.epa.gov]
Sent: Thu 9/17/2009 1:02 PM
To: Earl.Hayter@usace.army.mil; Cope.Ben@epamail.epa.gov; HOPE Bruce; CClaytor@parametrix.com
Cc: Humphrey.Chip@epamail.epa.gov; Koch.Kristine@epamail.epa.gov
Subject: Portland Harbor Fate and Transport Model

        A few years ago, we decided to use a mechanistic fate and transport model developed by Bruce Hope for the Portland Harbor site. The model was to link the hydrodynamic sedimentation transport (HST) model with the food web model. This became the so-called "hybrid model." The fate and transport model divided the site into 37 cells that range from 1/2 to 1 mile in length. The fate and transport model represents a relatively simple modeling approach and used Stella as the modeling platform for increased transparency and ease review.

        Yesterday, during a management team meeting with the LWG, we discussed the status of the modeling process. The LWG stated that use of the Stella model has presented significant logistical challenges due to the large amount of information being fed into the fate and transport model from the HST model. According to the LWG, the model is being held together with duct tape and bailing wire. In addition, the LWG stated that the fate and transport model has other limitations such as the cell size and permanent sequestration of contaminants once buried. As a result, the LWG would like to utilize a new fate and transport modeling approach. They are proposing to use a model developed by QEA (now Anchor QEA): QEAFATE.

        As you may recall, we chose the relatively simple mechanistic fate and transport model because we did not want to pursue the full blown EFDC fate and transport model due to its complexity. I have no experience with QEAFATE but would like some input regarding whether QEAFATE is worth pursuing.

        My goal is to develop a useful hybrid model that will assist us in the evaluation of remedial action alternatives while at the same time avoiding unnecessary complexity and ensuring that the model is transparent and easily reviewable. Please let me know what you think about this proposal from the LWG and whether QEAFATE can achieve these goals.

        Thanks, Eric